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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,945	07/16/2003	Brent A. McDonald	DC-04959	8595
33438	7590	01/03/2006	EXAMINER	
HAMILTON & TERRILE, LLP P.O. BOX 203518 AUSTIN, TX 78720			CRIBBS, MALCOLM D	
			ART UNIT	PAPER NUMBER
			2115	
DATE MAILED: 01/03/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/620,945	<b>Applicant(s)</b> MCDONALD ET AL.	
	<b>Examiner</b> Malcolm D. Cribbs	<b>Art Unit</b> 2115	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/16/2003</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

**Claims 1-17 are presented for examination.**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sulhoff et al (US Patent No. 6,687, 049) in view of Ma et al (US Patent No. 6,366,483).

3. As per claim 1, Sulhoff et al teach the invention, comprising:

a CPU operable to process information [Col 4 lines 2-5], interfaced with a power supply, the CPU having variable power demands for the power supplied within predetermined voltage and current tolerances [Col 4 lines 19-38];

4. Sulhoff et al do not teach a capacitance feed forward loop, between the capacitors and the CPU, for adjusting the power supply to a specific voltage and current tolerance. Specifically, Sulhoff et al teach a feed forward loop to adjust power strengths

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relatively quickly to power variations. However, Sulhoff et al fail to detail the specific location of the feed forward loop in reference to the load and the capacitors. A routineer in the power consumption art would have been motivated to look for a teaching for the possible location of the feed forward loop with respect to the capacitors and the CPU.

5. Ma et al teach another power consumption controlling system including a feed forward loop that adjusts to change in power rapidly. Ma et al teach a feed forward loop interfaced between the capacitor [Co] and the load [M] [Fig 1]. In summary, Ma et al teach a feed forward loop to adjust to power variances rapidly instead of wasting unnecessary power.

6. It would have been obvious to one of ordinary skill in the art to combine the teachings of Sulhoff et al and Ma et al because they both teach a power consumption control system using a feed forward loop with two different locations. Ma et al covers the deficiency of Sulhoff et al by teaching the detail of the feed forward loop's location.

7. Claims 2-4, 6-9, and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sulhoff et al [US Patent No. 6,687,049] in view of Ma et al [US Patent No. 6,366,483] as applied to claim 1 above, and further in view of Tian et al [Publication No. US 2004/0114215].

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8. As per claims 4, 6, 11, 12, Sulhoff et al and Ma et al do not teach a current and voltage feed back loop for communicating the sensed current and voltage to the power supply. Sulhoff et al's teachings have been discussed hereinabove. Tian et al teach a feed forward loop to quickly adjust [Page 4 [0040] power and a feed back loop which adjust gain and power in terms of a change in current [Page 3 [0039] lines 15-19].

9. It would have been obvious to the one of ordinary skill in the art to combine the teachings of Sulhoff et al and Ma et al with Tian et al because they all teach a feed forward loop to adjust power levels rapidly. Tian et al's teaching of a feed back loop control would improve the accuracy of Sulhoff et al and Ma et al by allowing them to properly adjust the power of the power supply with respect to the sensed current.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Malcolm D. Cribbs whose telephone number is 571-272-5689. The examiner can normally be reached on M-F 8AM-430PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Malcolm D Cribbs  
Examiner  
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A handwritten signature in black ink, consisting of a large, stylized 'M' followed by a horizontal line extending to the right.